The Role of Imaging Radar in Forest Management

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Poster Session

This poster session will illustrate how synthetic aperture radar (SAR) technology works, and how it can be used in the field of forest management. SAR allows earth scientists to look at the Earth in a whole new way. It can see through clouds, acquire images at night, peer beneath dense forest canopies, and penetrate dry desert sands. NASA's Jet Propulsion Laboratory, in collaboration with German and Italian space agencies and an international team of scientists and engineers, recently built and launched the Spaceborne Imaging Radar-C/X-Band Synthetic Aperture Radar (SIR-C/X-SAR) mission on the Space Shuttle Endeavour in April and October, 1994, Images from this sophisticated system are helping earth scientists monitor our precious resources. Newly processed images from the SIR-C/X-SAR mission of several forested regions demonstrate the ability of SAR to map various land cover and vegetation properties. SAR is particularly useful in distinguishing land cover categories, including water, bare ground, grassland, deciduous forest, and coniferous forest. SAR's capability to monitor surface water under forest canopies has also been demonstrated. Additionally, SAR is sensitive to forest biomass, particularly in areas of regrowth following clear cutting, The SIR-C/X-SAR data suggest the applicability of SAR as a tool which can provide unique information for forest management.

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